

**FINDING OF NO SIGNIFICANT IMPACT  
AND  
ENVIRONMENTAL ASSESSMENT  
FOR  
NORTH CAROLINA HIGHWAY 24 AND PINEY GREEN ROAD  
PUBLIC-PRIVATE VENTURE (PPV) PROJECTS  
MARINE CORPS BASE, CAMP LEJEUNE  
ONslow COUNTY, NORTH CAROLINA**

Responsible  
Officer:

Commanding General  
Marine Corps Base  
PSC Box 20004  
Camp Lejeune, North Carolina 28542-0004

Point of Contact:

Mr. H. Wayne West  
Deputy AC/S, Marine Corps  
Community Services Department  
1401 West Road  
Camp Lejeune, North Carolina 28547-2539  
(910) 451-2525

May 2004

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Pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations §1500-1508) implementing procedural provisions of the National Environmental Policy Act, Marine Corps Base (MCB), Camp Lejeune gives notice that an Environmental Assessment (EA) and Finding Of No Significant Impact (FONSI) have been prepared for the proposed construction and operation of the North Carolina Highway 24 and Piney Green Road Public-Private Venture (PPV) Projects.

The EA addresses impacts associated with the proposed action to develop a 14-acre tract on government property at the intersection of NC Highway 24 and Piney Green Road. The EA addresses three alternatives in addition to the proposed action. They are: the No Action alternative; the alternative to construct on Birch Street Extension; and the alternative to construct along Lejeune Boulevard at Tarawa Terrace. The proposed action is the preferred alternative. The Birch Street and Tarawa Terrace alternatives do not meet the purpose and need of generating funds for use in improving the quality of life for Marines and their dependents aboard Camp Lejeune. The potential environmental impacts of these two alternatives were not analyzed in the EA. The No Action alternative would not have any environmental impacts.

Implementation of the proposed action on the 14-acre site will cause the following impacts:

- Short-term soil disturbance during construction
- Loss of wildlife habitat and red-cockaded woodpecker recruitment acreage
- Conversion of upland forest to commercialized urban areas
- Loss of military training areas
- Loss of buffer provided by existing forest

These impacts are discussed in the EA. They are not significant impacts. The environmental staff identified jurisdictional wetlands within the project area. The action sponsor or his representative will take all reasonable measures to avoid, minimize, and mitigate impacts to jurisdictional wetland areas. Unavoidable impacts to wetlands will require coordination with the U. S. Army Corps of Engineers and other agencies including but not limited to the North Carolina Department of the Environment and Natural Resources.

Based on information gathered during preparation of the EA, the Marine Corps finds that the North Carolina Highway 24 and Piney Green Road Public-Private Venture (PPV) Projects will not significantly impact the human environment. The EA addressing this action is on file and may be reviewed by interested parties at: Commanding General, Consolidated Public Affairs Office, Marine Corps Base, Camp Lejeune, North Carolina 28542-0004. Telephone (910) 451-7440. A limited number of copies of the document are available to fill single copy requests.

1 June 2004  
Date

Robert C. Dickerson

Robert C. Dickerson  
Brigadier General, U.S. Marine Corps  
Commanding General  
Marine Corps Base, Camp Lejeune

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April 2004

## SUMMARY

Marine Corps Base (MCB), Camp Lejeune, North Carolina, proposes to develop a 14-acre (5.6 hectares) tract on government property at the intersection of North Carolina (NC) Highway 24 and Piney Green Road. Marine Corps Community Services (MCCS), MCB, Camp Lejeune would enter into Public-Private Ventures (PPVs) with private concessionaires to construct the structures, access/service roads, and parking areas and to operate certain businesses determined to be in the best interest of MCB, Camp Lejeune. Site development would include an access roadway from NC Highway 24 and a service road with an entrance on Piney Green Road, adjacent parking facilities for each commercial facility, modification and extension of existing utilities, and landscaping around the commercial units.

The alternatives to the proposed actions are no action (i.e., the status quo, or no development, on the 14-acre tract), construction of the commercial facilities off Birch Street Extension (from the intersection of Holcomb Boulevard and Birch Street to the intersection of Main Service Road and Cross Street) or adjacent to NC Highway 24 in the Tarawa Terrace area. The no action alternative would not provide funding to enhance the quality of life services for Marines and their families at MCB, Camp Lejeune or while deployed. The MCCS solicited bids for commercial facilities off Birch Street Extension, but did not receive an adequate number of responses from the business community. Additionally, a 14-acre commercial site adjacent to NC Highway 24 and Tarawa Terrace is not available and this area would have more traffic congestion and therefore be less convenient than the proposed project site. Therefore, the no-action alternative, construction of the commercial facilities off Birch Street Extension, or adjacent to NC Highway 24 in the Tarawa Terrace area would not satisfy the purpose and need of the proposed action. The proposed action is the preferred alternative because it is the only alternative that would provide funds to enhance the quality of life for Marines and their families.

The proposed action would result in the conversion of up to 14 acres (5.6 hectares) of maneuver training to developed areas with a concomitant loss of wildlife habitat, red-cockaded woodpecker (RCW) recruitment acreage, military training area, and forest acreage used to buffer noise. The affected forested areas are adjacent to the intersection of N. C. Highway 24 and Piney Green Road. The change in habitat would not adversely affect long-term achievement of the goals of the Mission Compatible Plan for Red-cockaded Woodpecker on MCB Camp Lejeune. There would be no impact to threatened and endangered species.

There would be no impact to any known cultural resources with the proposed action. The proposed action would not adversely affect air or water quality, surface or ground water, wetlands, the coastal zone, or any installation restoration sites.

## TABLE OF CONTENTS

<b><u>DESCRIPTION</u></b>	<b><u>PAGE NO.</u></b>
<b>1.0 PURPOSE OF AND NEED FOR ACTION .....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Purpose of and Need For Proposed Action.....	1
1.3 Environmental Review Process .....	1
<b>2.0 ALTERNATIVES.....</b>	<b>2</b>
2.1 Description of Alternatives .....	2
2.1.1 No Action Alternative.....	2
2.1.2 Proposed Action Alternative.....	2
2.1.3 Alternatives Considered and Dismissed .....	3
2.2 Evaluation of Alternatives .....	4
2.2.1 No Action Alternative.....	4
2.2.2 Proposed Action Alternative.....	4
2.3 Selection of Preferred Alternative .....	5
<b>3.0 AFFECTED ENVIRONMENT .....</b>	<b>5</b>
3.1 Physical Environment .....	5
3.1.1 Soils.....	5
3.1.2 Floodplains.....	5
3.1.3 Topography and Surface Hydrology.....	5
3.1.4 Groundwater .....	5
3.1.5 Water Quality.....	5
3.1.6 Air Quality .....	5
3.1.7 Noise .....	6
3.1.8 Cultural Resources.....	6
3.1.9 Hazardous Waste Sites.....	6
3.2 Natural Resources .....	6
3.2.1 Vegetation.....	6
3.2.2 Wildlife .....	7
3.2.3 Endangered and Threatened Species .....	7
3.2.4 Wetlands .....	8
3.3 Socioeconomic Characteristics .....	8
3.3.1 Land Use .....	8
3.3.2 Population .....	9
3.3.3 Traffic and Transportation .....	9
3.3.4 Utilities and Infrastructure .....	9
<b>4.0 ENVIRONMENTAL CONSEQUENCES .....</b>	<b>9</b>
4.1 Environmental Impact Evaluation .....	9
4.2 Physical Environment .....	10
4.2.1 Soils.....	10

4.2.1.1 No Action.....	10
4.2.1.2 Proposed Action.....	10
4.2.2 Floodplains.....	10
4.2.2.1 No Action.....	10
4.2.2.2 Proposed Action.....	10
4.2.3 Topography and Surface Hydrology.....	10
4.2.3.1 No Action.....	10
4.2.3.2 Proposed Action.....	10
4.2.4 Groundwater .....	11
4.2.4.1 No Action.....	11
4.2.4.2 Proposed Action.....	11
4.2.5 Water Quality.....	11
4.2.5.1 No Action.....	11
4.2.5.2 Proposed Action.....	11
4.2.6 Air Quality .....	11
4.2.6.1 No Action.....	11
4.2.6.2 Proposed Action.....	11
4.2.7 Noise .....	11
4.2.7.1 No Action.....	11
4.2.7.2 Proposed Action.....	11
4.2.8 Cultural Resources .....	12
4.2.8.1 No Action.....	12
4.2.8.2 Proposed Action.....	12
4.2.9 Hazardous Waste Sites.....	12
4.2.9.1 No Action.....	12
4.2.9.2 Proposed Action.....	12
4.3 Natural Resources .....	12
4.3.1 Vegetation.....	12
4.3.1.1 No Action.....	12
4.3.1.2 Proposed Action.....	12
4.3.2 Wildlife .....	12
4.3.2.1 No Action.....	12
4.3.2.2 Proposed Action.....	12
4.3.3 Endangered and Threatened Species .....	13
4.3.3.1 No Action.....	13
4.3.3.2 Proposed Action.....	13
4.3.4 Wetlands .....	13
4.3.4.1 No Action.....	13
4.3.4.2 Proposed Action.....	13
4.4 Socioeconomic Characteristics .....	13
4.4.1 Land Use .....	14
4.4.1.1 No Action.....	14
4.4.1.2 Proposed Action.....	14
4.4.2 Population .....	14
4.4.2.1 No Action.....	14

4.4.2.2 Proposed Action.....	14
4.4.3 Traffic and Transportation .....	14
4.4.3.1 No Action.....	14
4.4.3.2 Proposed Action.....	14
4.4.4 Utilities and Infrastructure .....	15
4.4.4.1 No Action.....	15
4.4.4.2 Proposed Action.....	15
4.5 Cumulative Impacts .....	15
<b>5.0 COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.....</b>	<b>16</b>
5.1 National Environmental Policy Act .....	16
5.2 Clean Water Act.....	16
5.3 Endangered Species Act .....	16
5.4 National Historic Preservation Act .....	16
5.5 Coastal Zone Management Act.....	17
5.6 Executive Orders.....	17
5.6.1 Executive Order 11593, Protection and Enhancement of the Cultural Environment.....	17
5.6.2 Executive Order 11988, Flood Plain Management.....	17
5.6.3 Executive Order 11990, Protection of Wetlands .....	17
5.6.4 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations .....	17
5.6.5 Executive Order 13045, Protection of Children from Environmental Health Risks.....	17
<b>6.0 REFERENCES.....</b>	<b>18</b>
<b>7.0 LIST OF PREPARERS.....</b>	<b>19</b>
<b>8.0 APPENDIX A.....</b>	<b>21</b>

### **LIST OF TABLES**

Table 1. Summary of Environmental Consequences by Alternative .....	3
Table 2. List of Endangered and Threatened Species Investigated .....	7

### **LIST OF FIGURES** (Follows Appendix A)

FIGURE 1. Project Vicinity
FIGURE 2. General Project Areas
FIGURE 3. Project Area Soils and Wetland Areas
FIGURE 4. Elevation Contours
FIGURE 5. Land-Use Zoning

## **1.0 PURPOSE OF AND NEED FOR ACTION**

**1.1 Introduction.** This Environmental Assessment (EA) addresses impacts associated with the proposed Public-Private Ventures (PPVs) development at NC Highway 24 and Piney Green Road, Marine Corps Base (MCB) Camp Lejeune, North Carolina (Figure 1 and Figure 2). The development of the PPVs aids in the promotion of programs run by Marine Corps Community Services Department (MCCS) to enhance quality of life for Marines and their families.

**1.2 Purpose of and Need For Proposed Action.** MCCS is the Quality of Life (QOL) provider for the United States Marine Corps. Camp Legume's MCCS is comprised of just over 2000 employees, most of whom are civilian government employees. MCCS is divided into three operational areas: Business Operations, Programs, and Marine Corps Family Team Building, along with one major Support area. MCCS provides, among numerous businesses and programs, retail operations, fitness and leisure time services, and numerous social support programs. In recent years, MCCS Nonappropriated Fund (NAF) profits supporting essential QOL programs have declined. This decline has resulted primarily from rising operating costs (health insurance, retirement costs, Headquarters Marine Corps assessments, credit card expenses, and composite insurance premiums) coupled with declining revenues in certain business operations (AT&T phone contract). Since Fiscal Year 2001, the cumulative effect has been to reduce NAF profits by \$5,750,000 (Personal Communication, 8 January 2004, Mr. Wayne West, Deputy AC/S, MCCS, MCB, Camp Lejeune). Funding for MCCS QOL services comes in part from Public-Private Ventures (PPVs). These funds are obtained from a negotiated percentage of sales within the License to Operate Agreement between MCCS MCB, Camp Lejeune and private concessionaires. The purpose and need of the proposed action is to establish PPVs on MCB, Camp Lejeune, which provide funds to enhance QOL services provided by MCCS for Marines and their families.

**1.3 Environmental Review Process.** This EA addresses potential environmental impacts associated with the proposed construction of PPVs in the NC Highway 24 and Piney Green Road area. It has been prepared in compliance with Section 102 of the National Environmental Policy Act (NEPA); the Council on Environmental Quality Regulations for Implementing NEPA (40 CFR Parts 1500-1508); and Marine Corps Order P5090.2A, Environmental Compliance and Protection Manual. Other relevant federal, state, or local regulations addressed in this EA are discussed in Section 5.0. An EA is a concise public document for which a federal agency is responsible. An EA briefly provides sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding Of No Significant Impact (FONSI). The United States Marine Corps is the lead agency for the proposed action.

For this EA, it was determined in a meeting 28 July 2003, by the action sponsor and Base environmental experts that the scope of environmental resource categories to be addressed should include the physical environment (i.e., soils, floodplains, topography, surface water, groundwater, water and air quality, noise, cultural resources, and hazardous waste sites), natural resources (i.e., vegetation, fish and wildlife, endangered and threatened species, and wetlands), and socioeconomic characteristics (i.e., land use, population, traffic and transportation, and utilities and infrastructure).



It was also determined in the 28 July 2003 meeting by the action sponsor and Base environmental experts that the following environmental resources categories would not be impacted by the proposed action: climate, geology, and unique natural areas. These items were excluded from further analysis for the following reasons: the proposed action would not cause any change to the climate or geology and the proposed action area does not contain any known unique natural areas (USMC, 1987).

## **2.0 ALTERNATIVES**

This section presents the alternatives and the environmental impacts associated with each alternative. The evaluation of environmental impacts associated with each alternative is based on information from Section 3.0, Affected Environment, and Section 4.0, Environmental Consequences. Table 1 presents a summary of environmental impacts of each alternative.

### **2.1 Description of Alternatives**

**2.1.1 No Action Alternative** - The no action alternative consists of no PPV development at any of the following locations: the 14-acre (5.6 hectares) project site at NC Highway 24 and Piney Green Road, the Birch Street Extension area, and the Tarawa Terrace area.

**2.1.2 Proposed Action Alternative** - The proposed action is the preferred alternative. It would involve the construction of PPV projects and would affect up to 14-acres (5.6 hectares) at the intersection of NC Highway 24 and Piney Green Road.

The proposed development would directly affect up to 14 acres (5.6 hectares) of forest and military training area (Figure 2). Within the project area, MCB Camp Lejeune proposes to undertake the following actions:

- **Clearing of Forested Areas** – Construction of PPVs would necessitate the clearing of forested land. The property is adjacent to the intersection of N.C. Highway 24 and Piney Green Road.
- **Development of Sites** – The proposed site area would be divided into sub-parcels. Sites would be developed using License to Operate Agreements negotiated with commercial interests.

**Table 1. Summary of Environmental Consequences by Alternative**

<b>Alternative</b>	<b>Environmental Consequences</b>
No Action – No Development	None
Birch Street Extension Area	Short-term soil disturbance Conversion of upland forest to developed areas
Tarawa Terrace Area	Short-term soil disturbance Conversion of upland forest to developed areas
Proposed Action	Short-term soil disturbance Loss of wildlife habitat and RCW recruitment acreage Conversion of upland forest to developed areas Loss of training areas to commercial use Loss of noise buffer

Site development for the collective proposed actions includes new parking and driveway connections, modification and extension of existing utilities (water, electricity, sanitary sewer, and telephone). The construction within the collective project areas would include appropriate storm water runoff control measures and approved sedimentation and erosion control plans. All exposed soils would be revegetated post-construction. Species selected for revegetation would preferably be typically used for landscaping and require minimal maintenance. Plant species selected for revegetation would be selected for appropriate season of planting to maximize success. All grading activities would comply with Federal, State, and local regulations.

Materials resulting from clearing and grading of the project sites as part of the proposed action would be removed to the mainside landfill off Piney Green Road or to an appropriate recycling program. For example, properly separated/sorted wood waste may be managed at the Base Wood Waste Management Site, and incidental solid waste may be managed at the Base Subtitle D Solid Waste Management Facility.

The proposed action would not adversely impact air or water quality, surface or groundwater, natural resources, threatened or endangered species, or known cultural resources. Impacts to jurisdictional wetlands would be avoided or minimized as a result of implementing the proposed action.

**2.1.3 Alternatives Considered and Dismissed.** Two alternatives were considered and dismissed as they do not meet the project purpose and need. The environmental impacts of these alternatives are not discussed in this EA.

**Birch Street Extension Area Development.** There are undeveloped commercial sites in the Birch Street Extension area of the Base. MCCS solicited bids from commercial interests in this area, but did not receive an adequate number of proposals from the business community necessary to generate funds to enhance QOL services provided by MCCS.

**Tarawa Terrace Area Development.** Development of a PPV site in the Tarawa Terrace (TT) area was investigated. However, there is not a sufficiently sized undeveloped area in the Tarawa Terrace area with adequate access for patrons of the development. Additionally, traffic access to such an area would be problematic due to higher traffic volumes along NC Highway 24 in the Tarawa Terrace area. Another potential impediment to development along NC Highway 24 in the TT area is a city/county greenway trail (over the abandoned railroad track) leased to the City of Jacksonville. It runs through the middle of the undeveloped strip, making it much less useful or desirable (Personal Communication, 8 January 2004, Mr. Wayne West, Deputy AC/S, MCCS, MCB, Camp Lejeune).

## **2.2 Evaluation of Alternatives**

**2.2.1 No Action Alternative.** By not undertaking the proposed Public-Private Venture (PPV) activities in the Piney Green Road and NC Highway 24 area, MCB Camp Lejeune would not meet goals to provide funding to MCCS for provision of QOL services to personnel and dependents assigned to the Base.

The no action alternative means that opportunities for increasing funding to MCCS would not be utilized. The no action alternative would not satisfy the project purpose and need. The no action alternative would have no environmental consequences. The no action alternative would save forest acreage that creates a noise buffer from military training and acreage currently managed as a recruitment partition for future occupation by RCW. The environmental impacts of the no action alternative are discussed in Chapter 4 of the EA.

**2.2.2 Proposed Action Alternative.** The proposed action satisfies the project purpose and need by providing MCCS additional opportunities to partner with private businesses to provide funding for QOL services to Marines and families of MCB, Camp Lejeune. The preferred site would provide relatively easy access to the sites by extending the road at the Piney Green Shopping Center light and proceeding east to the Piney Green Road light. Although not all of the area designated may be developed, it was determined to be more cost-effective to conduct one environmental analysis rather than piecemealing the process over several 4-5 acre sites (Personal Communication, 8 January 2004, Mr. Wayne West, Deputy AC/S, MCCS MCB, Camp Lejeune).

No adverse cumulative impacts to natural resources (e.g., vegetation, wildlife, and wetlands), cultural resources, and the physical environment (e.g., soils and surface hydrology) are expected. No adverse impacts to endangered and threatened species are anticipated.

The proposed action would change approximately 14 acres (5.6 hectares) of land cover from mixed pine/hardwood forest areas to developed areas associated with the development of a total of eight commercial business sites. The project area is used for military training. Development of the project area would remove approximately 14 acres (5.6 hectares) from the available training area of the Base.

During construction of the proposed action, there may be minor noise impacts of short duration and temporary, short-term disruption of traffic flow adjacent to each phase of the PPV business

construction. The proposed action would have no adverse effects on MCB Camp Lejeune facilities and operations.

**2.3 Selection of Preferred Alternative.** When considering the provision of opportunities for MCCS to provide funding for quality of life services for personnel and their dependents at MCB Camp Lejeune or on deployment, and the project purpose and need, the proposed action alternative is the preferred alternative.

### **3.0 AFFECTED ENVIRONMENT**

This section describes the environment of the areas that would be affected by the development of the currently undeveloped areas of the proposed action.

#### **3.1 Physical Environment**

**3.1.1 Soils.** The soil unit map for Camp Lejeune (USMC, 1998) shows two soil types occurring within the project area (Figure 3). They are: Ra – Rains fine sandy loam, nearly level and ON – Onslow loamy fine sand, nearly level. Both Onslow loamy fine sand and Rains fine sandy loam have been classified as prime farmland (Barnhill, 1992).

**3.1.2 Floodplains.** The activities of the proposed action are located outside the 100-year floodplain (Figure 3) (FEMA/NC, 2002). The nearest flood plain is about one-half mile away.

**3.1.3 Topography and Surface Hydrology.** The elevation of the project area ranges from about 39 to 41 feet (12.0 to 12.6 meters) above m.s.l (Figure 4). The project area is located within the headwaters of Henderson Pond and an unnamed tributary to Wallace Creek, which is a tributary to the New River.

**3.1.4 Groundwater.** Groundwater resources in the Camp Lejeune area are found in several different aquifers. The surficial aquifer has a high water table level of approximately 4-5 feet (Barnhill, 1992), and may be up to 100 feet deep. This aquifer occurs in undifferentiated surface sediments throughout the area and is the most susceptible to contamination (NCDENR, 2001). All of the Base's drinking water is supplied by wells drawing from the Castle Hayne aquifer (NCDENR, 2001). The Castle Hayne aquifer is found at depths of around 86 feet (26.2 meters) and is overlain by sediments of the Yorktown Formation (NCDENR, 2001).

**3.1.5 Water Quality.** The North Carolina Department of Environment and Natural Resources (NCDENR) assigns classifications to the waters of the State. Wallace Creek is classified as Tidal Salt Water, Class SB. Class SB refers to the best usage for the water. The best use for Wallace Creek waters is primary recreation, aquatic life propagation and survival, fishing, wildlife, and secondary recreation. Wallace Creek also has a supplementary classification of NSW. NSW refers to waters classed as Nutrient Sensitive and require limitations on nutrient inputs (NCDEHNR, 1992).

**3.1.6 Air Quality.** The ambient concentrations of pollutants in Onslow County are well below national standards for the following: total suspended particulates, sulfur dioxide, carbon

monoxide, ozone, nitrogen oxides, and lead. The North Carolina ambient air quality standards include all the national standards, plus a standard for total suspended particulate matter (TSP) and particulate matter with a diameter of 10 microns or less (PM10). Therefore, MCB Camp Lejeune is in attainment with the Clean Air Act National Ambient Air Quality Standards for all the criteria pollutants (Personal Communication, 17 September 2003, Mr. Brad Newland, Engineer, North Carolina Department of Environment and Natural Resources, Division of Air Quality). The proposed action is in compliance with Section 176(c) of the Clean Air Act, as amended. A conformity determination is not required because Onslow County has been designated by the State of North Carolina as an attainment area.

**3.1.7 Noise.** Within the project area, noise issues are not a major environmental concern for MCB Camp Lejeune because of the size and location of the Base, the location of the high noise sources well within the Base boundaries, and the noise abatement practices currently in place. The main sources of environmental noise emanate from airfields, weapons, rocket and missile firing ranges, and demolition and explosive disposal sites. The project area lies within an area of low ambient noise level (Radian Corporation, 1996).

**3.1.8 Cultural Resources.** A site survey to assess possible cultural resources in the 14-acre project area was conducted as a preliminary to coordination with the North Carolina State Historic Preservation Office (SHPO). No historic properties were found in the project area. Coordination with the North Carolina SHPO was conducted by MCB Camp Lejeune letter of 1 December 2003. The SHPO concurred with a finding of no historic properties affected letter dated 19 December 2003. (Mr. Rick Richardson, Base Archaeologist, email of 2 February 2004). Investigations of historic and archaeological resources were conducted in accordance with Section 106 of the National Historic Preservation Act, 16 U.S.C. §§ 470 *et. seq.*, and the Secretary of the Interior's Standards and Guidelines (48 F.R. 44720-23).

**3.1.9 Hazardous Waste Sites.** The project area does not contain any known hazardous waste sites (Personal Communication, 28 July 2003, Mr. Robert Lowder, Environmental Engineer, Environmental Quality Branch, MCB Camp Lejeune).

## **3.2 Natural Resources**

**3.2.1 Vegetation.** On 3 September 2003, the 14-acre (5.6 hectares) project area was walked by Mr. Hugh Heine, U.S. Army Corps of Engineers. The majority of the 14-acre (5.6 hectares) project area is vegetated with an overstory of loblolly pine (*Pinus taeda*), mid-story of sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), and willow (*Salix nigra*), and ground cover of fetterbush (*Lyonia lucida*), red and sweet bay (*Persea borbonia* and *Magnolia virginiana*, respectively), giant cane (*Arundinaria gigantea*), sweet pepper bush (*Clethra alnifolia*), bracken fern (*Pteridium aquilinum*) and cinnamon ferns (*Osmunda cinnamome*), wisteria (*Wisteria frutescens*), and green briar (*Smilax* spp.).

The forest in the project area contains timber that is marketable. This timber would be harvested and sold by the Forestry Section of the MCB Camp Lejeune Environmental Conservation Branch.

**3.2.2 Wildlife.** Permanent resident wildlife species found year-round on MCB Camp Lejeune have been discussed in detail in the Multiple-Use Natural Resources Management Plan (USMC, 1987).

**3.2.3 Endangered and Threatened Species.** Table 2 lists endangered species, species of concern, and threatened species that inhabit areas similar to the project area. However, no threatened or endangered species have been found in the project area (Personal Communication, 9 September 2003, Ms. Karen Ogden, Wildlife Biologist, ECON, MCB, Camp Lejeune). For the federal listings, “endangered” is defined as a species that is in danger of extinction throughout all or a significant portion of its range. The term “threatened” is defined as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The term “species of concern” is an informal term that refers to those species which the U.S. Fish and Wildlife Service believes might be in need of concentrated conservation actions. “Species of Concern” receive no legal protection under the Endangered Species Act and the use of the term does not necessarily mean that the species would eventually be proposed for listing as a threatened or endangered species. For the State listings, “special concern” is defined as those species whose breeding populations are in danger of extirpation in North Carolina and which may, or may not, be of concern over portions of their range outside North Carolina.

**Table 2. List of Endangered and Threatened Species Investigated.**

<u>Common Name</u>	<u>Scientific Name</u>	<u>Federal Status</u>	<u>North Carolina Status</u>
American Alligator	<i>Alligator mississippiensis</i>	Threatened (S/A)	Threatened
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	Endangered
Bachmann’s sparrow	<i>Aimophila aestivalis</i>	Sp. of Concern	Special Concern
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Threatened
Pinebarrens sandreed	<i>Calamovilfa brevipilis</i>	---	Endangered
Chapman’s sedge	<i>Carex chapmanii</i>	Sp. of Concern	Threatened
Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	Endangered	Endangered
Torrey’s muhley	<i>Muhlenbergia torreyana</i>	---	Endangered
Cooley’s meadowrue	<i>Thalictrum cooleyi</i>	Endangered	---
Hirsts’ Panic Grass	<i>Panicum hirstii</i>	Candidate	Endangered
Golden sedge	<i>Carex lutea</i>	Endangered	Endangered

Note: Threatened S/A – threatened due to similarity of appearance with other protected species. These species are not biologically endangered or threatened and are not subject to consultation under Section 7 of the Endangered Species Act.

The nearest active red-cockaded woodpecker (*Picoides borealis*) cluster is 1.3 miles from the project area. Timber removal for the proposed action would occur within a recruitment partition managed for future occupation by RCW. After project completion, the 210-acre (85 hectare) partition will retain sufficient pine acreage to support an RCW group in the future (Personal Communication, 9 September 2003, Ms. Karen Ogden, Wildlife Biologist, ECON, MCB, Camp Lejeune. The site was also investigated by Mr. Hugh Heine, Biologist, U.S. Army Corps of Engineers on September 3, 2003, and no evidence of RCW use was noted.)

MCB Camp Lejeune has had nesting Bald eagles in the recent past. The nest site was located near the Sneads Ferry New River Bridge. The Fish and Wildlife Service's *Habitat Guidelines for Bald eagle in the Southeast* (1987) provides for an exclusion buffer of 1500 feet (455 meters) where no permanent changes can be made. This known nesting site is more than 8 miles from the intersection of Highway 24 and Piney Green Road.

The endangered plant species, rough-leaved loosestrife, golden sedge, and Cooley's meadowrue, require habitats that do not occur within the project area. Rough-leaved loosestrife occurs within the ecotones between pine/oak savannahs and pocosins. Cooley's meadowrue and golden sedge share habitat. Cooley's meadowrue requires some type of disturbance to maintain its open habitat. Golden sedge prefers the ecotone between pine savannahs and wet hardwood or hardwood/conifer forests.

**3.2.4 Wetlands.** A field investigation of the proposed project area was conducted 1-5 October 2003, by Versar Inc. under a task order for the U.S. Army Corps of Engineers, Wilmington District. Areas identified as wetlands were mapped and turned over to MCB, Camp Lejeune for inclusion in the base geographic database. The wetlands are classed PF01 and PSS1 (Figure 3). Two areas of PF01 type comprise approximately 1.6 acres (0.65 ha) and one area of PSS1 type comprises approximately 0.44 acres (0.18 ha). PF01 is a palustrine forested broad-leaved deciduous type, and PSS1 is a palustrine scrub-shrub broad-leaved deciduous type. Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions (33 C.F.R. § 328.3). Wetlands possess three essential characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. The primary drainage feature on the project site is an unnamed tributary of Wallace Creek. Henderson Pond, a man-made recreational fishing pond, lies along the lower stretch of this tributary.

### 3.3 Socioeconomic Characteristics

**3.3.1 Land Use.** The Piney Green Road/N. C. Highway 24 area of MCB, Camp Lejeune is designated as a maneuver training area (Mr. Disel Hinkle, Range Development Division, AC/S Training and Operations, 2004). The area is forested and is managed as a recruitment partition for RCW.

Implementing the proposed action would allow only one timber harvest on the 14-acre site. MCB Camp Lejeune Forestry Division will assess the site for any marketable timber and coordinate all timber harvesting activities.

The area across NC Highway 24 from the proposed site is private property and has several land use zoning designations (Figure 5) (City of Jacksonville, 2003). The zoning designations closest to the site are as follow:

- **Business 1 (B-1) Zone:** This zone is established to accommodate businesses with a large variety of services. It is intended to include such businesses that would be oriented to a shopping center or mall.

- Conditional Use Business 1 (CU-B-1) Zone: This zone is the same as the B-1 zone, however, development of such sites requires a conditional/special use permit.
- Residential/Agricultural 20 (RA-20) Zone: This zone is for low-density residential and agricultural purposes, in a rural or near-rural setting. It is intended to insure that residential development without access to public water and/or sewer may take place in a manner so as to promote a healthful environment.
- Residential Multi-Family 5 (RM-5) Zone: This zone is intended for single and multi-family residential development in the City. The purpose of this zone is to provide for medium density residential uses while providing for higher density uses through the special use process.

The majority of local government revenues are based on property taxes. Property valuations for Jacksonville increased approximately 216 percent between 1981 and 1996 (City of Jacksonville, 2003). In 1996 the total valuation and tax rate for the city were \$1,090,162,899 and \$0.533/\$100 respectively (City of Jacksonville, 2003).

**3.3.2 Population.** The population affected by the proposed action includes personnel and dependents assigned to MCB, Camp Lejeune, retired military personnel, and civilian employees of the Base. This population numbered approximately 144,000 in mid-2003 (Personal Communication, 5 September 2003, Mr. Wayne West, MCCS, MCB, Camp Lejeune).

**3.3.3 Traffic and Transportation.** The proposed action would be adjacent to NC Highway 24 and Piney Green Road. NC Highway 24 is a major road through Onslow County. Piney Green Road provides access to the northern portion of the Base and is used by privately owned vehicles, commercial vehicles, and military vehicles to enter and exit the Base. There are two stoplights that control traffic on NC Highway 24 in the project area. The western-most light provides traffic control for the Piney Green Shopping Center and is the location for the proposed service road. The eastern-most light provides traffic control at the Piney Green Road/NC Highway 24 intersection. Average daily traffic (ADT) counts made by the North Carolina Department of Transportation in 1996 show that NC Highway 24 in the vicinity of the proposed project had a traffic volume of approximately 19,400 vehicles per day (City of Jacksonville, 1999).

**3.3.4 Utilities and Infrastructure.** The proposed action would require electric, water, and sanitary sewer services. Development of access roads and parking areas would require appropriate storm water structures not presently in place. Water and sanitary sewer services for businesses and residences along the NC Highway 24 corridor are provided by the city, county, or private entities. The two local electrical power companies provide electrical service to customers in the area.

## **4.0 ENVIRONMENTAL CONSEQUENCES**

**4.1 Environmental Impact Evaluation.** The following sections discuss the environmental impacts of the proposed action and no action alternatives. Direct and indirect impacts, long- and



short-term effects, and irreversible and irretrievable resource commitments are discussed with relation to their significance. Mitigation measures are included where applicable.

## **4.2 Physical Environment**

### **4.2.1 Soils**

**4.2.1.1 No Action.** The no action alternative would not adversely impact soils in the project area.

**4.2.1.2 Proposed Action.** The proposed action would unavoidably affect approximately 14 acres (5.6 hectares) of soils within the project area. Of the two soil types within the project area, the Natural Resource Conservation Service has designated them as prime farmland (Section 3.1.1). The project area is not currently used as cropland, nor has it been since it became federal government property in 1941. The area likely would not be used as farmland should the proposed action not be implemented. Loss of the project area as cropland is not expected to represent a significant impact.

Construction impacts to soils would result from removal of vegetation, grading of parking and landscaping areas, and renovation of recreational facilities. Removal of vegetation could result in temporary short-term increases in erosion and sedimentation. An approved erosion and sedimentation control plan would be implemented during construction to minimize soil loss and erosion. All exposed areas would be re-vegetated upon completion of construction. These measures would minimize the potential for any impacts from soil loss and erosion to the Wallace Creek watershed during and after implementation of the proposed action.

### **4.2.2 Floodplains**

**4.2.2.1 No Action.** The no action alternative would not affect the 100-year floodplain.

**4.2.2.2 Proposed Action.** The proposed action occurs entirely outside the 100-year floodplain. Implementation of the proposed action would not impact the floodplain as the project area is greater than one-half mile from the floodplain.

### **4.2.3 Topography and Surface Hydrology**

**4.2.3.1 No Action.** The no action alternative would not impact topography or surface hydrology in the project area.

**4.2.3.2 Proposed Action.** The proposed action would change the topography of the 14-acre site by grading and paving parking lots and roads and construction of buildings. Implementation of the proposed action would include the appropriate storm water runoff control measures and approved soil erosion and sedimentation control plans. Silt fences would be erected prior to construction beginning on site. Exposed areas would be re-vegetated upon completion of construction. These measures would minimize the potential for any surface hydrology impacts to the Wallace Creek watershed during implementation and future use of the proposed action.

#### **4.2.4 Groundwater**

**4.2.4.1 No Action.** There would be no adverse effects to groundwater under the no action alternative.

**4.2.4.2 Proposed Action.** The proposed action would not adversely impact groundwater resources in the project areas. There may be slight changes in localized surficial aquifer recharge rates due to changes in impermeable surface areas, but such potential changes are not expected to be significant.

#### **4.2.5 Water Quality**

**4.2.5.1 No Action.** The no action alternative would not adversely impact water quality in the Wallace Creek watershed because no changes in current conditions would occur.

**4.2.5.2 Proposed Action.** The water quality in Wallace Creek would not be adversely impacted by the proposed action. Construction activities would occur well outside the floodplain areas of the creek. Appropriate Best Management Practices would be used to ensure removal of suspended particulates prior to surface runoff entering Wallace Creek both during construction and long-term. Implementation of the proposed action would include appropriate storm water management measures and re-vegetation of all exposed soil areas. These measures would minimize the potential for any impacts to the water quality of Wallace Creek during implementation of the proposed action. The proposed action is not expected to adversely impact the water quality of Henderson Pond.

#### **4.2.6 Air Quality**

**4.2.6.1 No Action.** The no action alternative would not affect the existing ambient air quality.

**4.2.6.2 Proposed Action.** The proposed action would not have adverse impacts on ambient air quality. Dust emissions resulting from site preparation during construction activities would be minor and subject to fugitive dust control measures. No adverse impacts to air quality are expected. Therefore, no mitigation measures would be required.

#### **4.2.7 Noise**

**4.2.7.1 No Action.** The no action alternative would not affect current noise levels in the project area.

**4.2.7.2 Proposed Action.** The proposed action project area lies within an area of low ambient noise level (Radian Corporation, 1996). The development and construction activities of each project within the proposed action would cause temporary noise level increases. Noise impacts would be minimized by restricting construction activities to normal daylight, weekday hours.

## **4.2.8 Cultural Resources**

**4.2.8.1 No Action.** The no action alternative would not change current conditions within the project area in respect to cultural resources.

**4.2.8.2 Proposed Action.** An intensive archaeological survey was conducted within the Area of Potential Effect (APE) for the proposed action. The Base archaeologist corresponded with the NC SHPO regarding the findings, or lack of same. The NC SHPO finding of no historic properties affected letter of 19 December 2003 documents the proposed action would not affect cultural resources. (Appendix A).

## **4.2.9 Hazardous Waste Sites**

**4.2.9.1 No Action.** The no action alternative would have no effect on any hazardous waste sites on MCB Camp Lejeune.

**4.2.9.2 Proposed Action.** There are no expected impacts to the proposed action from known hazardous waste sites on MCB, Camp Lejeune. If contaminants are suspected through odors or visual inspections during intrusive activities, the contractor must immediately contact the Environmental Quality Branch at 451-5068 for further instructions (Personal Communication, 28 July, 2003, Mr. Robert Lowder, Environmental Engineer, Environmental Quality Branch, MCB Camp Lejeune).

## **4.3 Natural Resources**

### **4.3.1 Vegetation**

**4.3.1.1 No Action.** The no action alternative would not result in any changes to vegetation in the Piney Green Road area.

**4.3.1.2 Proposed Action.** Up to 14 acres (5.6 hectares) of forested land within the project area would be cleared for construction of buildings, parking, and road access. Where possible, building placement and site planning may slightly reduce area of forested land affected. All exposed soil areas would be re-vegetated after completion of construction activities. In terms of the timber harvests in the project area, MCB Camp Lejeune provides 40 percent of net revenues from the sale of timber to the Onslow County School System. Implementing the proposed action would provide only one timber harvest from the project area sites.

### **4.3.2 Wildlife**

**4.3.2.1 No Action.** The no action alternative would not affect fish and wildlife species that currently use or inhabit the Piney Green Road area.

**4.3.2.2 Proposed Action.** The proposed action would result in the loss of approximately 14 acres (5.6 hectares) of forested wildlife habitat. Removal of vegetation and the construction of the proposed facilities would directly disturb wildlife. Both the number and type of wildlife species would change after construction. Highly mobile species could migrate out of the project

area to compete for food and cover elsewhere. The less mobile species would suffer direct mortality.

Loss of the pine/hardwood forest would be an unavoidable adverse impact. Various resident wildlife species may pose a moderate human-wildlife interaction risk at the site due to the availability of artificial foods. Species that are likely to be attracted include raccoon, opossum, and black bear. Appropriate sanitation practices would be employed to reduce these potential nuisance wildlife situations.

### **4.3.3 Endangered and Threatened Species**

**4.3.3.1 No Action.** There would be no effect on threatened and endangered species as a result of the no action alternative.

**4.3.3.2 Proposed Action.** During field surveys conducted 3 September 2003, for site assessment of the proposed action area by Mr. Hugh Heine of the US Army Corps of Engineers, no threatened or endangered species were found. No adverse effects to RCW or the long-term goals of the recovery plan (USMC, 1999a) would result from implementation of the proposed action. The project area is in a recruitment partition managed for future occupation by RCW. After completion of the project, the 210-acre partition would retain sufficient pine acreage to support a RCW group in the future (Personal Communication, 9 September 2003, Ms. Karen Ogden, Wildlife Biologist, Environmental Management Division, MCB, Camp Lejeune). The proposed action would not affect any endangered or threatened species or state-listed species.

### **4.3.4 Wetlands**

**4.3.4.1 No Action.** The no action alternative would not affect wetland areas in the Piney Green Road area of MCB Camp Lejeune.

**4.3.4.2 Proposed Action.** Wetlands present at the southeast corner of the eastern most site would be avoided. Impacts to the two wetland areas to the west of Piney Green Road would be minimized by limiting disturbance to permitted road crossings. Implementation of a State-approved erosion and sedimentation control plan during construction would prevent silt from leaving the construction sites and entering wetlands.

The Corps of Engineers Nationwide Permit No. 14 and the North Carolina Division of Water Quality's General Water Quality Certification Number 3404 authorize road crossings. Concurrence with the proposed use of these authorizations would be requested from the respective agencies and all conditions of the authorizations would be complied with in their entirety. Mitigation to offset unavoidable wetland impacts could be required by either or both agencies.

## **4.4 Socioeconomic Characteristics**

#### **4.4.1 Land Use**

**4.4.1.1 No Action.** The no action alternative would not change existing land use in the Piney Green Road area. MCB Camp Lejeune would continue to manage forested areas according to the Integrated Natural Resources Management Plan (INRMP, MCB Camp Lejeune, 2001), and developed areas according to the Base Master Plan (United States Department of the Navy, 1984).

**4.4.1.2 Proposed Action.** The proposed action would change the land use of the project area from growing trees and training Marines to commercial use. This would cause some training to be relocated to training areas toward the interior of the Base. The proposed site is also in a very effective game management unit of the Base. Development of the site may result in changes to recreational hunting programs and wildlife management strategies in the adjacent forested area. This could negatively impact management goals for white-tailed deer and potentially increase automobile-deer interactions in the Piney Green Road vicinity.

Implementing the proposed action would allow only one more timber harvest on the 14-acre site. Camp Lejeune provides 40 percent of its net profits from the sale of timber to the Onslow County School System. This location would provide no future generation of timber related revenues for sharing with the Onslow County School System.

Although not included in the City of Jacksonville's Land-Use Zoning, the proposed action is comparable with that adjacent (across NC Highway 24) Land-Use Zoning. Implementation of the PPVs may potentially reduce property tax revenues to Onslow County and the City of Jacksonville. Development of Base property would not allow Onslow County to collect property taxes that would be available if such development occurred on private lands.

#### **4.4.2 Population**

**4.4.2.1 No Action.** The no action alternative would potentially have an adverse effect on the personnel and families assigned to MCB Camp Lejeune. Morale and training effectiveness could be adversely impacted by inadequate funding of MCCS programs.

**4.4.2.2 Proposed Action.** The proposed action would have a positive affect on the personnel and their families by providing expanded funding opportunities for MCCS sponsored programs. Morale, training effectiveness, and equipment readiness would be expected to improve.

#### **4.4.3 Traffic and Transportation**

**4.4.3.1 No Action.** The no action alternative would not have an adverse affect on traffic flow in the Piney Green Road/NC Highway 24 intersection area. Current traffic patterns and use would not be changed.

**4.4.3.2 Proposed Action.** The proposed action is not expected to adversely affect traffic flows on MCB Camp Lejeune. There may be some localized, temporary traffic impacts associated with construction of new parking and driveway areas but these impacts are expected to be

minimal. The existing traffic signals are expected to be adequate for control of traffic accessing the proposed project areas.

#### **4.4.4 Utilities and Infrastructure**

**4.4.4.1 No Action.** The no action alternative would not have an adverse affect on utility services in the Piney Green Road/NC Highway 24 vicinity. Demand for electricity, drinking water, and sanitary sewer services would not be changed.

**4.4.4.2 Proposed Action.** The proposed action is not expected to adversely affect the utility and infrastructure services along the NC Highway 24 corridor. Development of the proposed sites would not increase demands on electrical, drinking water and sanitary sewer services more than comparable development along the highway corridor would otherwise.

#### **4.5 Cumulative Impacts**

This section addresses cumulative impacts resulting from the proposed action and other related past, present, and reasonably foreseeable future projects in or near the Piney Green Road/N. C. Highway 24 intersection area in accordance with the Council on Environmental Quality (CEQ) Regulations For Implementing The Procedural Provisions Of The National Environmental Policy Act (40 CFR § 1508.7, 1508.27).

Cumulative impacts of implementing the no action alternative, over time, would have the potential to cause adverse impacts to the morale of personnel and families assigned to or deployed from MCB, Camp Lejeune.

Cumulative impacts of implementing the proposed action could be increased encroachment on the base's primary mission to train Marines and increased difficulty in meeting the base's endangered species goals. These types of impacts also could be caused by proposals to develop areas of the base that are near adjacent land owners or proposals to develop either forested or unforested training areas.

Past projects include the construction of recreational facilities at Henderson Pond, widening of Piney Green Road, and security improvements to the Piney Green Road Gate. The proposed action represents the current activities in the Piney Green Road/NC Highway 24 area. The impacts of the proposed action have been discussed in Sections 3 and 4. The geographic area in which cumulative impact analysis was considered is shown in Figure 2.

At this time, there are no future projects planned for the Piney Green Road/NC Highway 24 area.

The proposed action, in conjunction with any past, present, or reasonably foreseeable future projects is not expected to have any significant adverse cumulative impacts. Future development in the project area would be subject to the requirements of and would be evaluated in accordance with the base's environmental impact review procedures published in Base Order 11000.1D..

## 5.0 COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

The implementation of the proposed action would comply with existing federal, state and local regulations. The federal acts, executive orders and state policies with which the proposed action demonstrates compliance include:

- National Environmental Policy Act (NEPA)
- Clean Water Act
- Endangered Species Act
- National Historic Preservation Act
- Coastal Zone Management Act
- Base Order 11350.2D, Refuse Disposal Procedures
- Base Order 5090.4, Solid Waste Reduction – Qualified Recycling Program
- Base Order 6240.5B, Hazardous Waste/Hazardous Material Management Program
- Executive Order 11593, Protection and Enhancement of the Cultural Environment
- Executive Order 11988, Flood Plain Management
- Executive Order 11990, Protection of Wetlands
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations
- Executive Order 13045, Protection of Children from Environmental Health Risks

**5.1 National Environmental Policy Act.** This EA has been prepared in accordance with Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Part 1500 – 1508) and Marine Corps NEPA procedures (MCO P5090.2A).

**5.2 Clean Water Act.** The Clean Water Act of 1977 as amended, was designed to assist in restoration and maintenance of the chemical, physical, and biological integrity of U.S. waters. Camp Lejeune discharges treated wastewater under an NPDES (National Pollutant Discharge Elimination System) permit and manages stormwater according to Section 402 of the act. All projects within the proposed action would include, as appropriate, approved sedimentation and erosion control plans and stormwater management permits to ensure compliance with provisions of the Clean Water Act.

**5.3 Endangered Species Act.** The Endangered Species Act of 1973 as amended, provides for the conservation of threatened and endangered species of animals and plants, as well as the habitats that support them. No threatened or endangered species are known to occur within the proposed action sites, therefore, the proposed action would have no known long- or short-term effects on threatened or endangered species.

**5.4 National Historic Preservation Act.** The National Historic Preservation Act of 1966 is designed to protect, enhance, and preserve any property that possesses significant architectural, archeological, historical, or cultural characteristics. Section 106 of this Act requires the head of any federal agency with jurisdiction over a federally financed action, prior to the expenditure, to take into account the effect of the action on any district, site, building, structure, or object that is included or eligible for inclusion in the National Register of Historic Places. There are no cultural resources known to be affected by the proposed action.

**5.5 Coastal Zone Management Act.** The North Carolina Coastal Area Management Act (CAMA) of 1974 was passed in accordance with the federal Coastal Zone Management Act (CZMA) of 1972. CAMA requires local governments in each of the 20 coastal counties in the state to prepare and implement a land use plan and ordinances for its enforcement. Upon approval by the North Carolina Coastal Resources Commission, the plan becomes part of the North Carolina Coastal Management Plan. Coastal zone management policies adopted in each plan must be consistent with established state and federal policies. Specifically, policy statements are required on resource protection; resource production and management; economic and community development; continuing public participation; and storm hazard mitigation, post-disaster recovery, and evacuation plans.

Camp Lejeune, located in Onslow County, one of the twenty coastal counties of North Carolina, is subject to the North Carolina Coastal Area Management Regulations designed to guide the use and development of the coastal zone. The proposed action is reasonably anticipated to have no effect on land or water uses, or natural resources, of the North Carolina coastal zone. The proposed action would require a consistency determination and concurrence from the North Carolina Department of Environment and Natural Resources, Division of Coastal Management.

## **5.6 Executive Orders**

### **5.6.1 Executive Order 11593 Protection and Enhancement of the Cultural Environment.**

The proposed action would not have any effects on cultural resources as discussed in sections 4.2.8 and 5.4.

**5.6.2 Executive Order 11988 Flood Plain Management.** All of the proposed action would occur outside the 100-year floodplain. The proposed action would not affect floodplain areas.

**5.6.3 Executive Order 11990 Protection of Wetlands.** As discussed in section 4.3.4, impacts to the wetland areas in the proposed action area would be minimized.

**5.6.4 Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.** The proposed action would not impact minority communities or low income populations because there are no such population present at MCB Camp Lejeune. The Department of Housing and Urban Development statutory definition for very low income (25 CFR § 813) was used as the test for identifying low income populations at MCB Camp Lejeune.

### **5.6.5 Executive Order 13045 Protection of Children from Environmental Health Risks.**

This order mandates federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children as a result of the implementation of federal policies, programs, activities, and standards (63 FR 19883-19888). The proposed action would not impact schools, housing areas, or gathering places of children. Therefore, there would be no short- or long-term impacts on the health and safety of children.



## 6.0 REFERENCES

Barnhill, W. L. 1992. Soil Survey of Onslow County, North Carolina. United States Department of Agriculture, Soil Conservation Service.

City of Jacksonville. 1999. City of Jacksonville 1996 Land Use Plan Update. Adopted by the City of Jacksonville City Council, January 19, 1999. Certified by the Coastal Resources Commission, January 29, 1999. Prepared by Holland Consulting Planners, Inc., Wilmington, North Carolina.

City of Jacksonville. 2003. Planning Division web site:  
<http://www.ci.jacksonville.nc.us/planning/planning.htm>. Last visited November 6, 2003.

North Carolina Department of Environment and Natural Resources (NCDENR), Division of Environmental Management. 1992. Classification and Water Quality Standards Assigned to the Waters of the White Oak River Basin. Reprint from North Carolina Administrative Code: 15A NCAC 2B .0312.

North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Resources. 2001. North Carolina Aquifers. Web-site:  
[http://www.ncwater.org/About\\_DWR/Division\\_of\\_Water\\_Resources/Water\\_Allocation\\_Section/Ground\\_Water\\_Branch/aquifercharacteristics/charact.html](http://www.ncwater.org/About_DWR/Division_of_Water_Resources/Water_Allocation_Section/Ground_Water_Branch/aquifercharacteristics/charact.html). Last visited November 13, 2002.

Radian Corporation. 1996. Evaluation of Environmental Noise Abatement Programs and Practices at Camp Lejeune. Camp Lejeune Noise Abatement Study, Project Number 94-36. Research Triangle Park, North Carolina.

Federal Emergency Management Agency (FEMA)/North Carolina, Floodplain Mapping Program, 2002.

United States Department of the Navy, Atlantic Division Naval Facilities Engineering Command. 1984. Master Plan, Camp Lejeune Complex, North Carolina.

United States Marine Corps, Camp Lejeune, North Carolina (USMC). 1987. Multiple-Use Natural Resources Management Plan.

United States Marine Corps, Camp Lejeune, North Carolina (USMC). 1998. Integrated Geographic Information Repository (IGIR) Data Catalog.

United States Marine Corps, Camp Lejeune, North Carolina (USMC). 1999a. Mission Compatible Plan for the Comprehensive Long Range Management of The Red-cockaded Woodpecker And Biological Assessment on Operations at Marine Corps Base Camp Lejeune, North Carolina.

## **7.0 LIST OF PREPARERS**

### **Principal Preparer:**

Stacy Samuelson	Biologist, Environmental Resources Section Wilmington District, U.S. Army Corps of Engineers
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### **Interdisciplinary Team:**

Wayne West	Deputy AC/S, MCCA Department, MCB Camp Lejeune
Disel Hinkle	Range Development Specialist, Training and Operations Department, MCB Camp Lejeune
Rick Richardson	Base Archaeologist, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune
Karen Ogden	Wildlife Biologist, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune
Martin Korenek	Wildlife Biologist, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune
Robert Lowder	Environmental Engineer, Environmental Quality Branch, Environmental Management Division, MCB Camp Lejeune
Carmen Lombardo	Wildlife Biologist, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune.
Patricia Raper	Environmental Control Specialist, Environmental Compliance Branch, Environmental Management Division, MCB Camp Lejeune
Kirk Kropinack	Environmental Control Specialist, Safety and Environmental Affairs Office, MCAS, New River
Danny Marshburn	Forester, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune

### **Contributors:**

Tom Barbee	Environmental Assessment Specialist, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune
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Philip Payonk	Biologist, Environmental Resources Section, Wilmington District, U.S. Army Corps of Engineers
Hugh Heine	Biologist, Environmental Resources Section, Wilmington District, U.S. Army Corps of Engineers
Twylah Hardison	Engineering Technician, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune
Jimmy Waldrop	Environmental Assessment Specialist, Environmental Conservation Branch, Environmental Management Division, MCB Camp Lejeune

# **APPENDIX A**

**State Historic Preservation Office Letter**



**North Carolina Department of Cultural Resources**  
**State Historic Preservation Office**  
David L. S. Brook, Administrator

Division of Historical Resources

Michael F. Easley, Governor  
Lisbeth C. Evans, Secretary  
Jeffrey J. Crow, Deputy Secretary  
Office of Archives and History

December 19, 2003

Scott A. Brewer, PE  
Director, Environmental Management  
U.S. Marine Corps Base  
PSC Box 20004  
Camp Lejeune, NC 28542-0004

Re: Development of Tract at Intersection of NC 24 and Piney Green Road for  
Multiple Public-Private Ventures between Marine Corps Community Services and  
Private Concessionaries, Onslow County, ER03-3512

Dear Mr. Brewer:

Thank you for your letter of December 1, 2003, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,

*Renee Gledhill-Earley*  
David Brook

[www.hpo.dcr.state.nc.us](http://www.hpo.dcr.state.nc.us)

**ADMINISTRATION**  
**RESTORATION**  
**SURVEY & PLANNING**

**Location**  
507 N. Blount St., Raleigh NC  
515 N. Blount St., Raleigh NC  
515 N. Blount St., Raleigh NC

**Mailing Address**  
4617 Mail Service Center, Raleigh NC 27699-4617  
4617 Mail Service Center, Raleigh NC 27699-4617  
4617 Mail Service Center, Raleigh NC 27699-4617

**Telephone/Fax**  
(919) 733-4763 • 733-8653  
(919) 733-6547 • 715-4801  
(919) 733-6545 • 715-4801



UNITED STATES MARINE CORPS  
MARINE CORPS BASE  
PSC Box 20004  
Camp Lejeune, North Carolina 28542-0004

IN REPLY REFER TO:

5750

BEMD

01 DEC 2003

Mr. David Brook  
Deputy State Historic Preservation Officer  
North Carolina Division of Archives and History  
4617 Mail Service Center  
Raleigh, North Carolina 27699-4617

Dear Mr. Brook:

Marine Corps Base, Camp Lejeune proposes to develop a tract at the intersection of North Carolina (NC) Highway 24 and Piney Green Road for multiple Public-Private Ventures between Marine Corps Community Services and private concessionaires (enclosure 1). The Area of Potential Effect (APE) consists of approximately 14 acres (5.6) hectares of a mixed pine/hardwood plot (enclosure 2). The APE is located outside Camp Lejeune's 125-meter distance to water, high-probability predictive model developed in consultation with the North Carolina Office of State Archaeologist.

On August 01, 2003, the Base Archaeologist completed a pedestrian survey, including random shovel testing, of the proposed construction area. The results of the survey, and a review of the archaeological sites inventory of the Base indicate that there are no historic properties to be affected within the project's APE. As such, we request your concurrence with our determination that the proposed tract development will have no effect on the Base's cultural resources.

This information is submitted for your comment and concurrence in accordance with Section 106 of the National Historic Preservation Act and 36 CFR 800, Protection of Historic and Cultural Properties. If you have any questions on this matter, please contact Rick Richardson, Base Archaeologist, Environmental Conservation Branch, Environmental Management Division, Installations and Environment Department, at (910) 451-7230, or email at RichardsonRR@lejeune.usmc.mil.

Sincerely,

SCOTT A. BREWER, PE  
Director, Environmental Management  
By direction of  
the Commanding General

- Enclosures: 1. Proposed Project Location on USGS Camp Lejeune  
Quadrangle Map  
2. Digital Aerial View of Proposed Project Location





Prepared 20 November 2003 by:  
Cultural Resources, ECON  
910-451-7009



Map Projection: UTM (NAD83, GRS1980)

INTEGRATED GEOGRAPHIC INFORMATION REPOSITORY  
Marine Corps Base, Camp Lejeune, NC

Managed by the GIS Office, Environmental Management Department

NOTE: THIS MAP IS FOR REFERENCE ONLY

The requester must be aware of data conditions and ultimately bear responsibility for the appropriate use of the information with respect to possible errors, original map scale, collection methodology, currency of data, and other conditions specific to certain data.

## Enclosure 1

### Proposed Project Location on USGS Camp Lejeune Quadrangle Map



Project Location





Prepared 20 November 2003 by:  
Cultural Resources, ECON  
910-451-7009



Map Projection: UTM (NAD83, GRS1980)

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## Enclosure 2

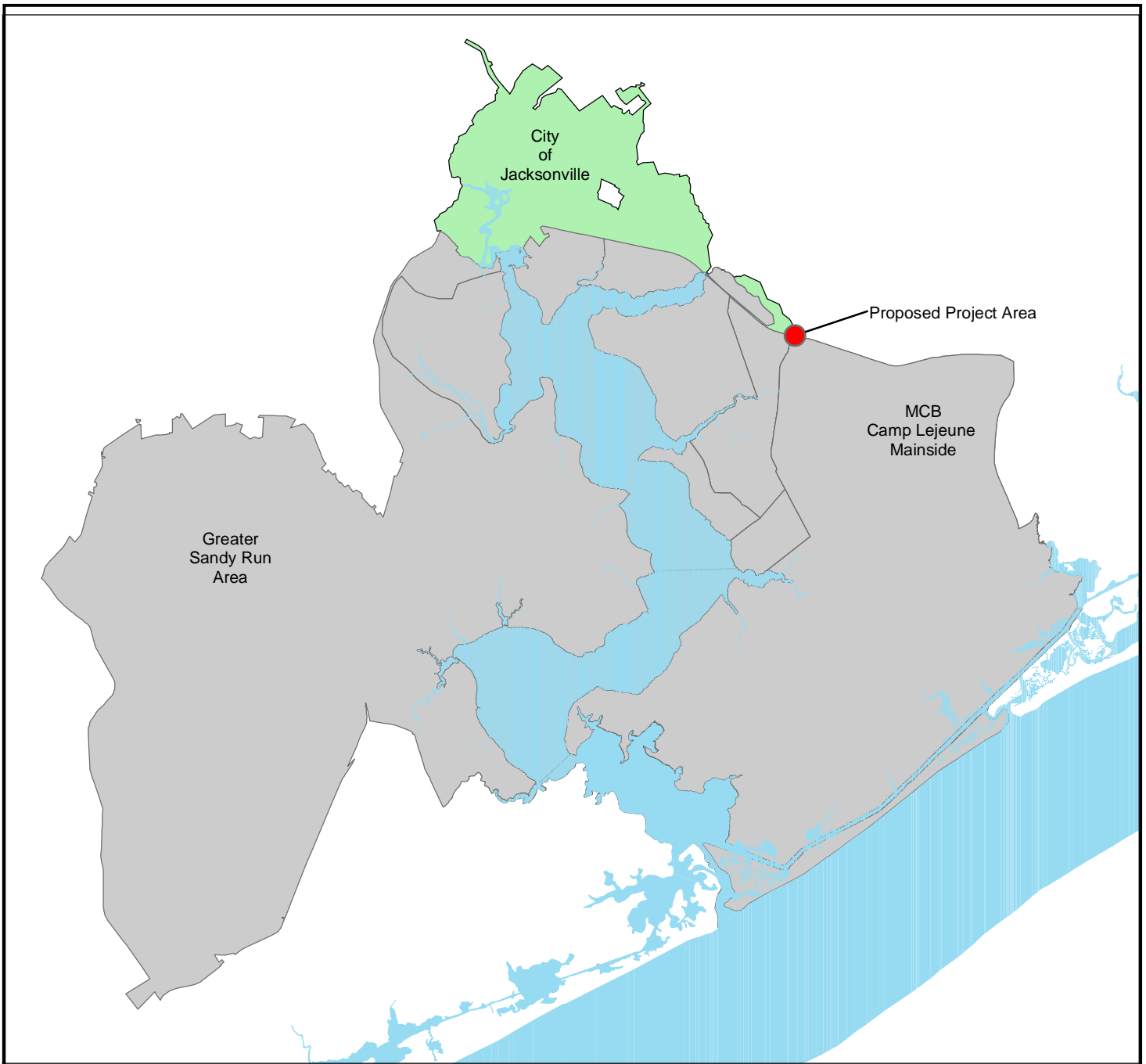
### Digital Aerial View of Proposed Project Location



Area of Potential Effect



# FIGURES



Author: JLW  
 Organization: ECON  
 Telephone: 451-9362



Map Projection: UTM (NAD83, GRS 1980)

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 Marine Corps Base, Camp Lejeune, NC

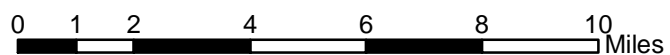
Managed by the GIS Branch, Business Technology Division,  
 Business & Logistics Support Department

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MCB, Camp Lejeune NC HWY 24 and Piney  
 Green Road Proposed Public-Private Venture (PPV) Projects  
 Proposed Project Location

Figure 1





Author: JLW  
 Organization: ECON  
 Telephone: 451-9362



Map Projection: UTM (NAD83, GRS 1980)

INTEGRATED GEOGRAPHIC INFORMATION REPOSITORY  
 Marine Corps Base, Camp Lejeune, NC

Managed by the GIS Branch, Business Technology Division,  
 Business & Logistics Support Department

NOTE: THIS MAP IS FOR REFERENCE ONLY

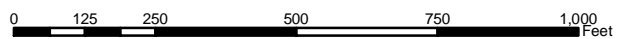
The requestor must be aware of data conditions and ultimately bear responsibility for the appropriate use of the information with respect to possible errors, original map scale, collection methodology, currency of data, and other specific conditions to certain data.

## MCB, Camp Lejeune NC HWY 24 and Piney Green Road Proposed Public-Private Venture (PPV) Projects

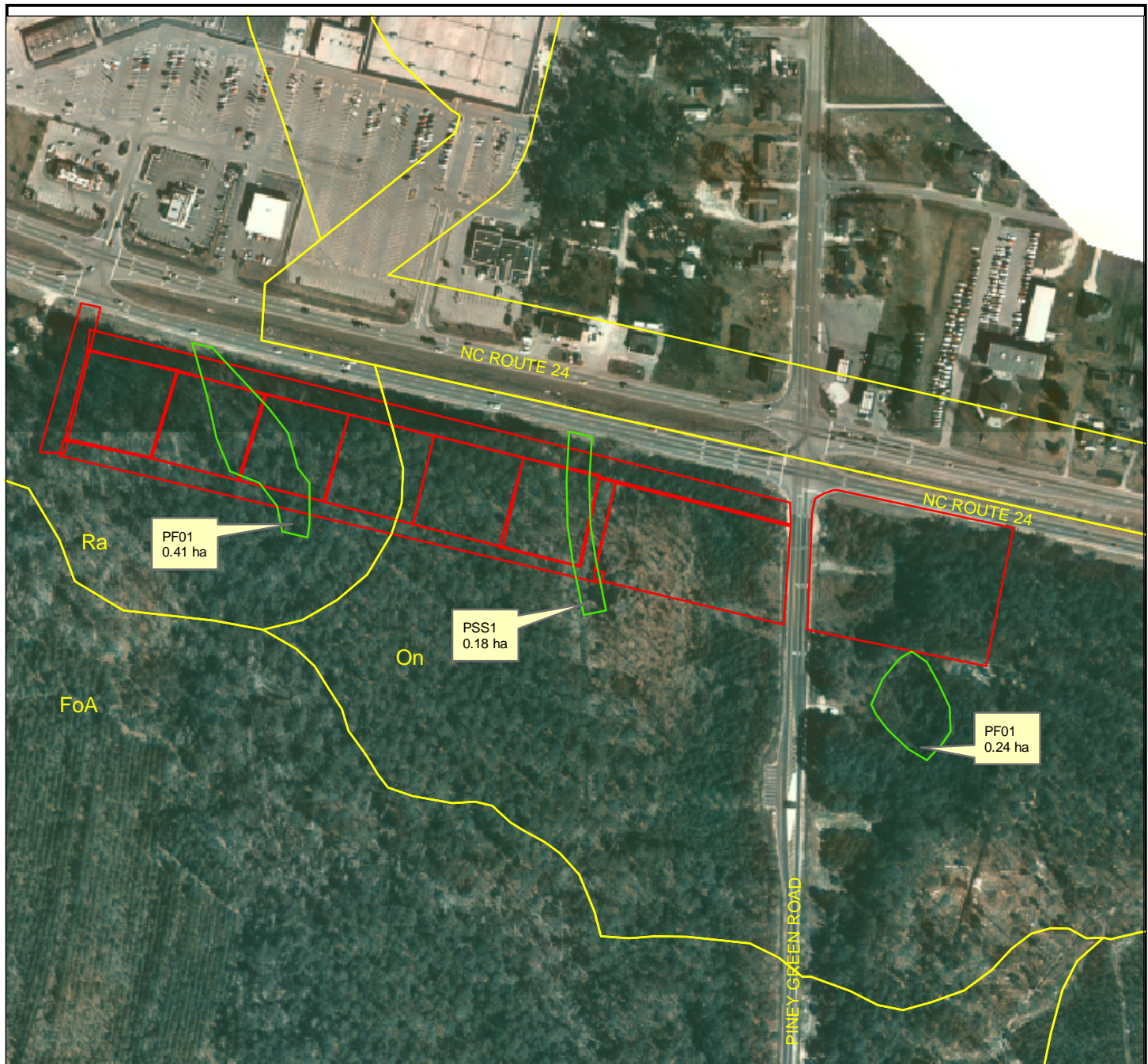
### Legend

- Proposed Project Sites
- Security Gate Upgrades

Figure 2







Author: JLW  
 Organization: ECON  
 Telephone: 451-9362



Map Projection: UTM (NAD83, GRS 1980)

INTEGRATED GEOGRAPHIC INFORMATION REPOSITORY  
 Marine Corps Base, Camp Lejeune, NC

Managed by the GIS Branch, Business Technology Division,  
 Business & Logistics Support Department

NOTE: THIS MAP IS FOR REFERENCE ONLY

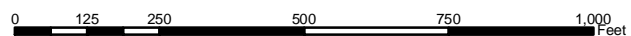
The requestor must be aware of data conditions and ultimately bear responsibility for the appropriate use of the information with respect to possible errors, original map scale, collection methodology, currency of data, and other specific conditions to certain data.

# MCB, Camp Lejeune NC HWY 24 and Piney Green Road Proposed Public-Private Venture (PPV) Wetland Areas and Soils Mapping

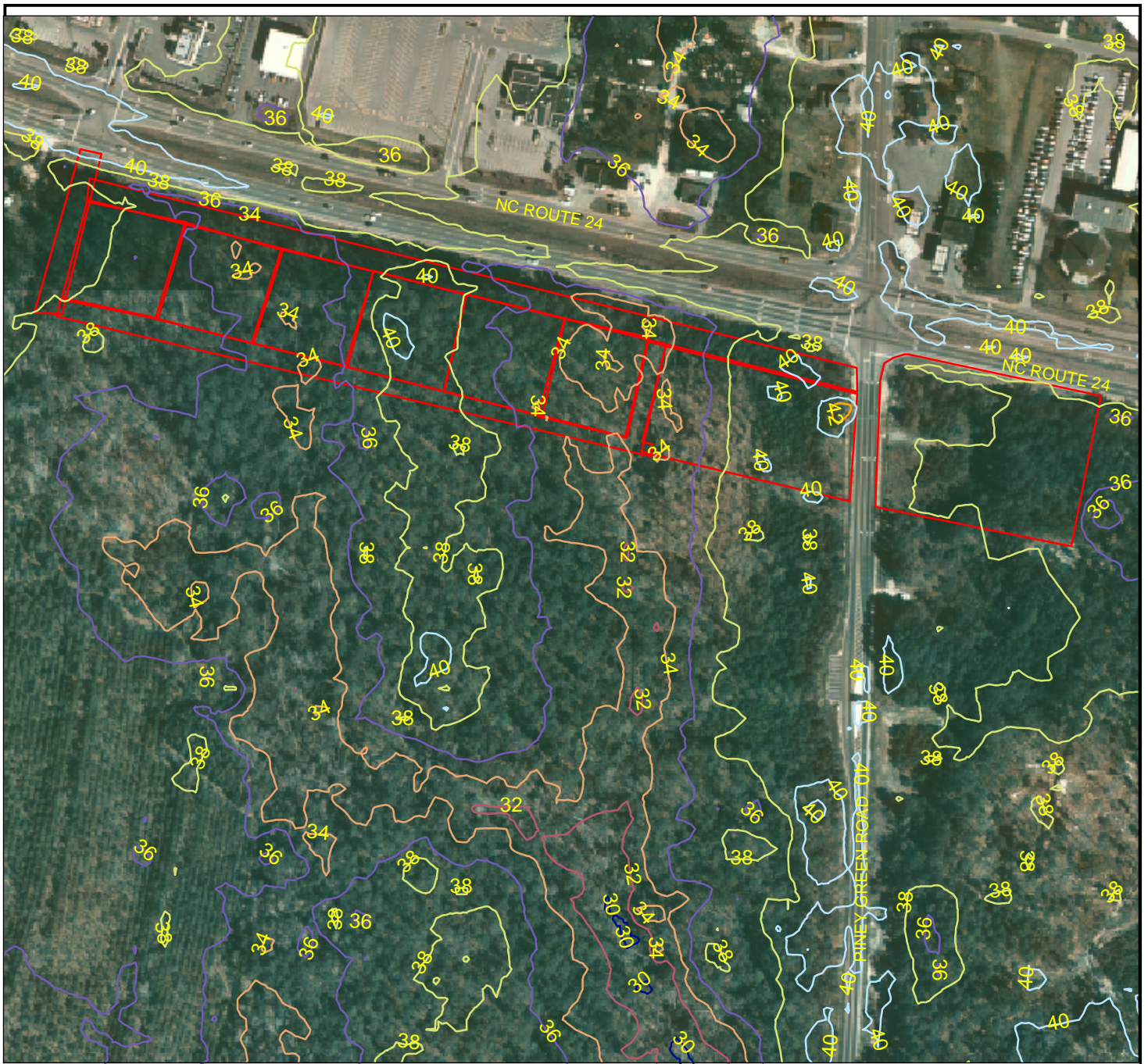
## Legend

- Proposed Project Sites
- Soil Unit
- Wetland Areas

Figure 3







Author: JLW  
 Organization: ECON  
 Telephone: 451-9362



Map Projection: UTM (NAD83, GRS 1980)

INTEGRATED GEOGRAPHIC INFORMATION REPOSITORY  
 Marine Corps Base, Camp Lejeune, NC

Managed by the GIS Branch, Business Technology Division,  
 Business & Logistics Support Department

NOTE: THIS MAP IS FOR REFERENCE ONLY

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MCB, Camp Lejeune NC HWY 24 and Piney  
 Green Road Proposed Public-Private Venture (PPV)  
 2-Foot Elevation Contours

**Legend**

Proposed Project Sites

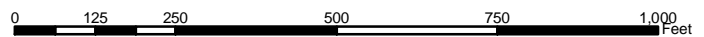
**Elevation (Contour 2 foot)**

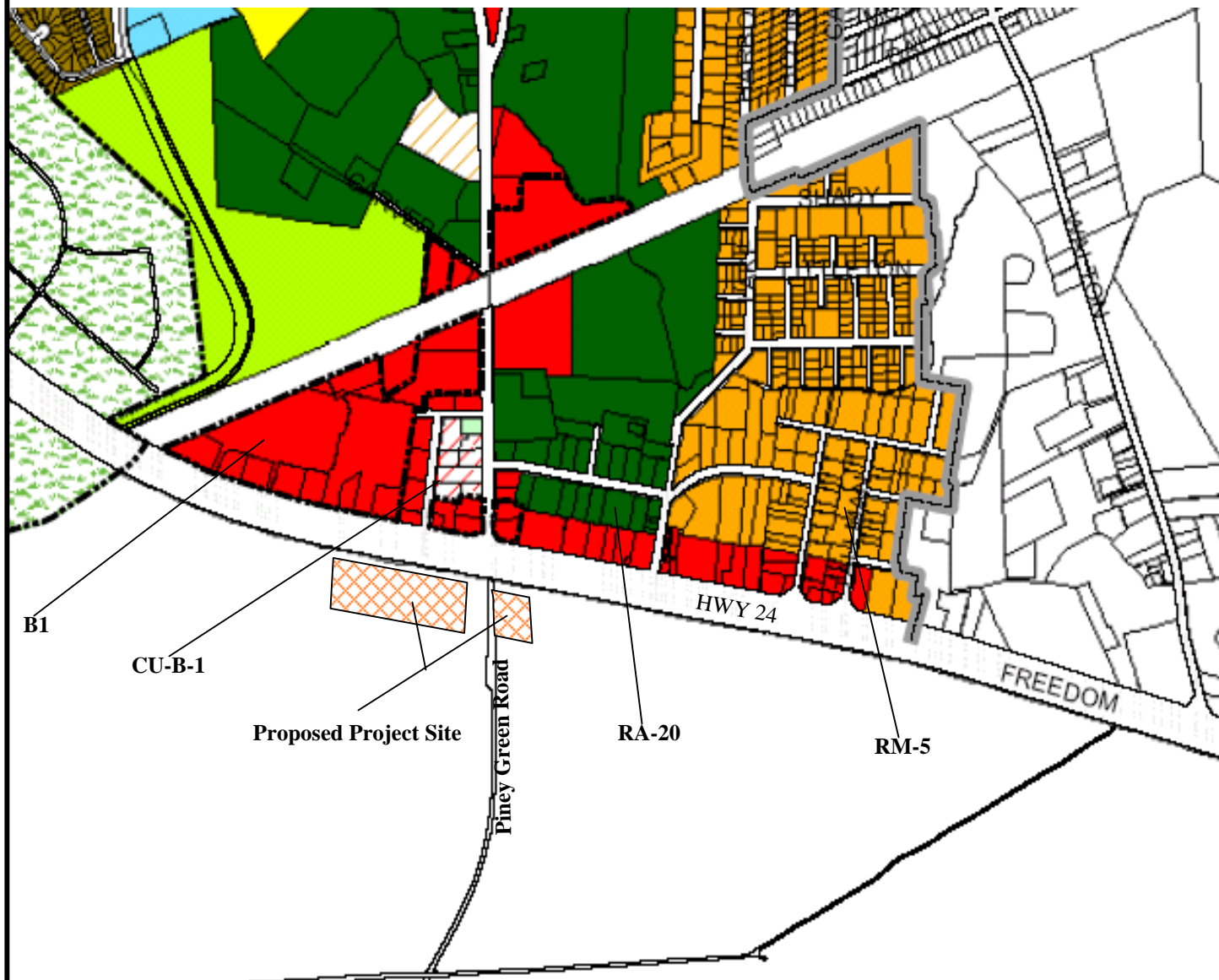
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**ELEVATION**

- 32
- 34
- 36
- 38
- 40
- 42

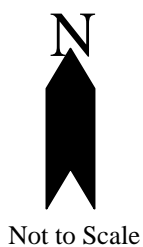
Figure 4





B1 = Business Zone  
 CU-B-1 = Conditional Use B1 Zone  
 RA-20 = Residential/Agricultural 20 Zone  
 RM-5 = Residential Multi-Family 5 Zone

Source:  
 City of Jacksonville, Planning Division  
<http://www.ci.jacksonville.nc.us/planning/ziningmap/zmapmain.htm>  
 Last updated: October 15, 2003



## Figure 5

MCB, Camp Lejeune  
 NC HWY 24 and Piney Green Road  
 Public-Private Venture (PPV) Projects  
 City of Jacksonville Land-Use Zoning